Towards Evidence Based ICT Policy and Regulation

Alison Gillwald

Research ICT Africa @ The EDGE Institute

RIA Co-ordinators' Workshop, Magliesburg, February 2009

theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Research ICT Africa!

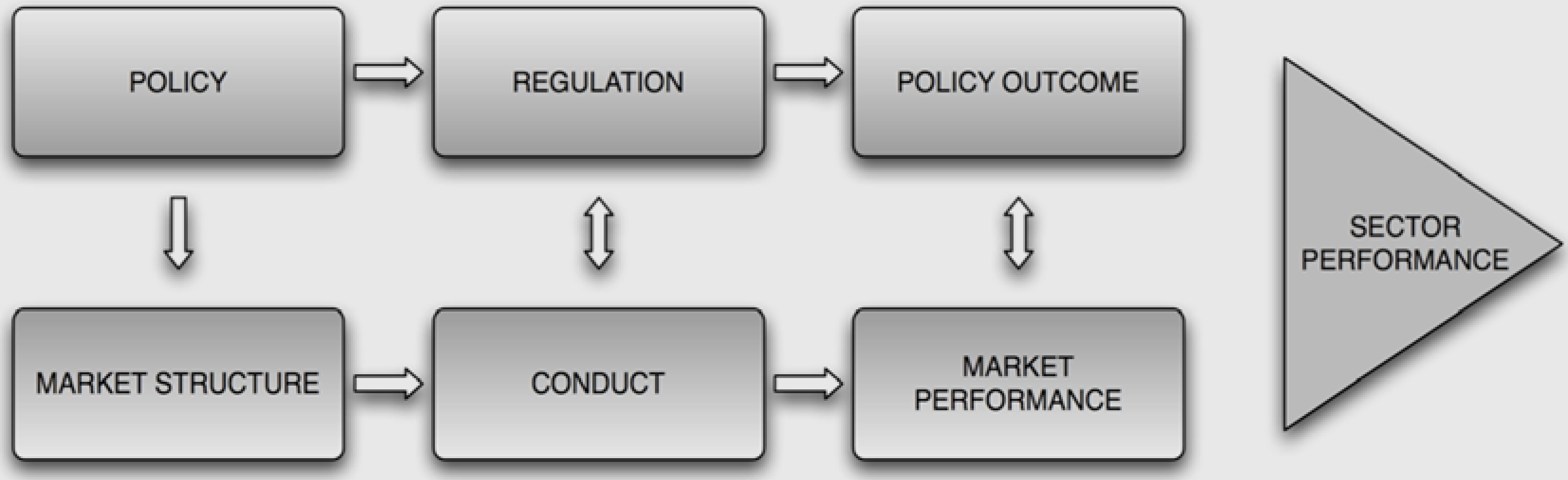
- Network of researchers conducting ICT policy and regulatory research in 20 African countries across the continent in the absence of data and analysis required for evidence based policy

Towards evidence based policy

- Policy research based on series of supply and demand side research undertaken by the network which is triangulated with a telecommunications regulatory environment perception survey.

- Integrate into an index of indicators that will provide decision-makers with an understanding of policy performance and identify points of intervention

Sector performance as policy outcomes



Market structure/Conduct

- Despite horizontal licensing regime, operators remain vertically integrated
- Anticompetitive incentives
- Requires constant adjustment of behaviour by regulator

Policy/Law

- ECA - no guiding policy
- ICASA Act - Ministerial veto power removed but Council appointment powers
- Extension of state state ownership and conflicts of interest
- Ministerial directives
- Altech declarator
- Appeal

Regulation

- Resources intensive access regulation
- Human capabilities and institutional capacity
- Independence/accountability
- ECA onerous timespans/ interested outcomes
- Delays in critical licensing and regulation

Market performance/policy outcomes

- Inefficient and expensive
- Asymmetries of information
- High cost of services
- Government choice of winners and losers
- Constraints on innovation

State ownership

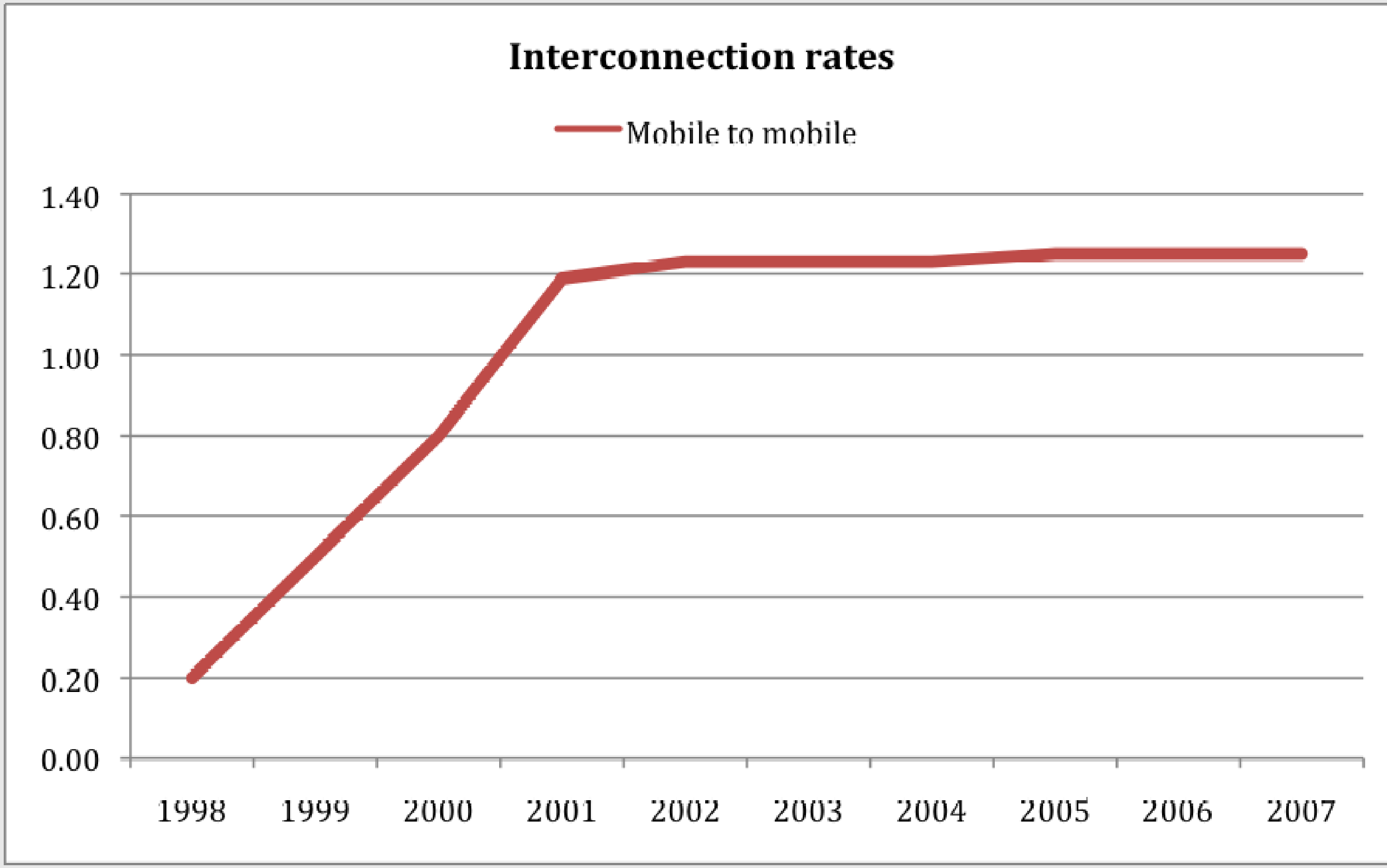
QuickTime™ and a
decompressor
are needed to see this picture.

Telecommunications regulatory environment

Fixed line sector	
Market entry	Ineffective
Access to scarce resources	Ineffective
Interconnection & Facilities	Ineffective
Regulation of anti-competitive practices	Ineffective
Universal service obligations	Ineffective

Mobile sector	
Market entry	Neither effective nor ineffective
Access to scarce resources	Ineffective
Interconnection & Facilities	Ineffective
Regulation of anti-competitive practices	Highly ineffective
Universal service obligations	Neither effective nor ineffective

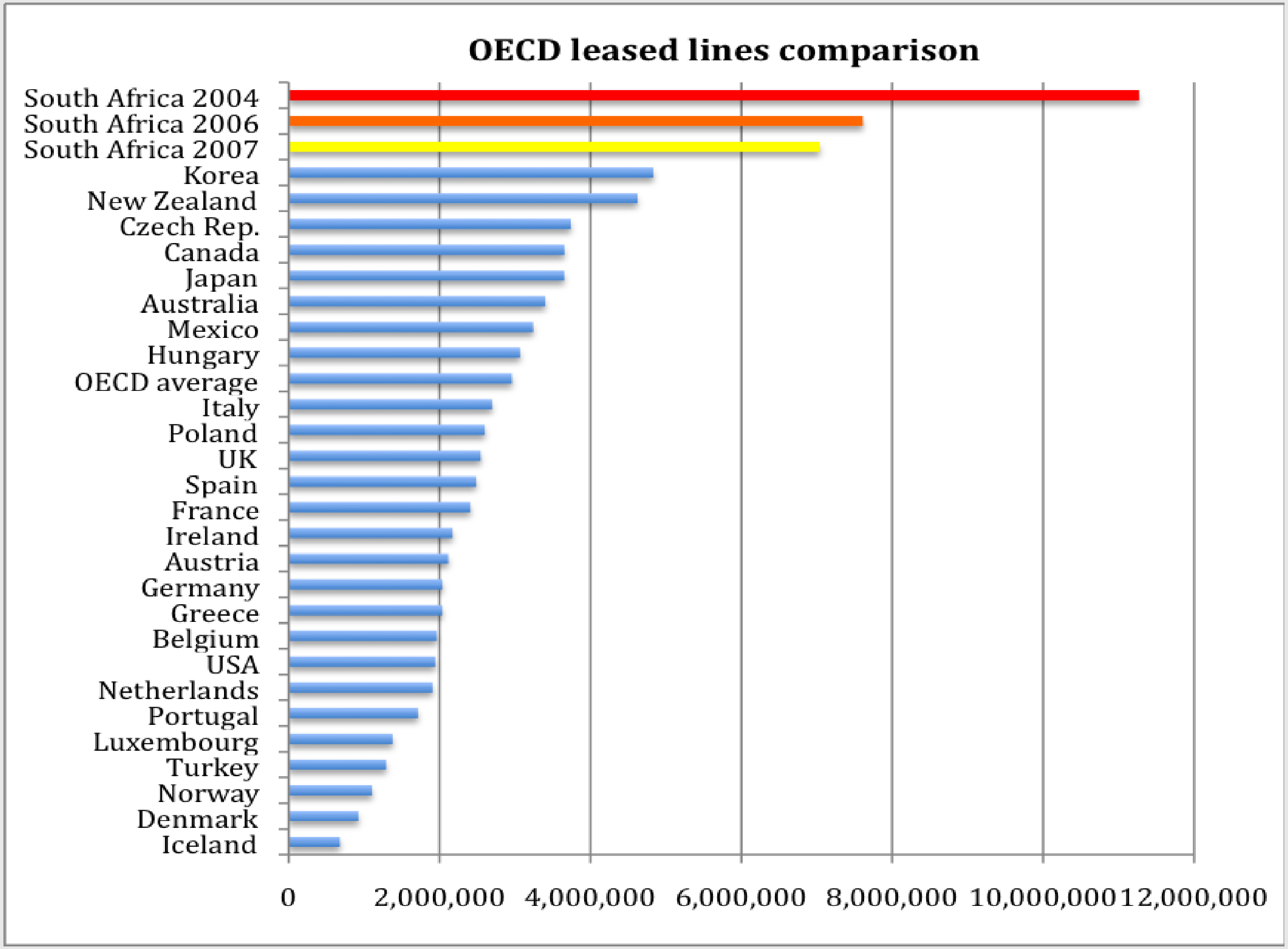
Vans sector	
Market entry	Ineffective
Access to scarce resources	Ineffective
Interconnection & Facilities	Ineffective
Regulation of anti-competitive practices	Ineffective
Universal service obligations	Ineffective



the edge institute

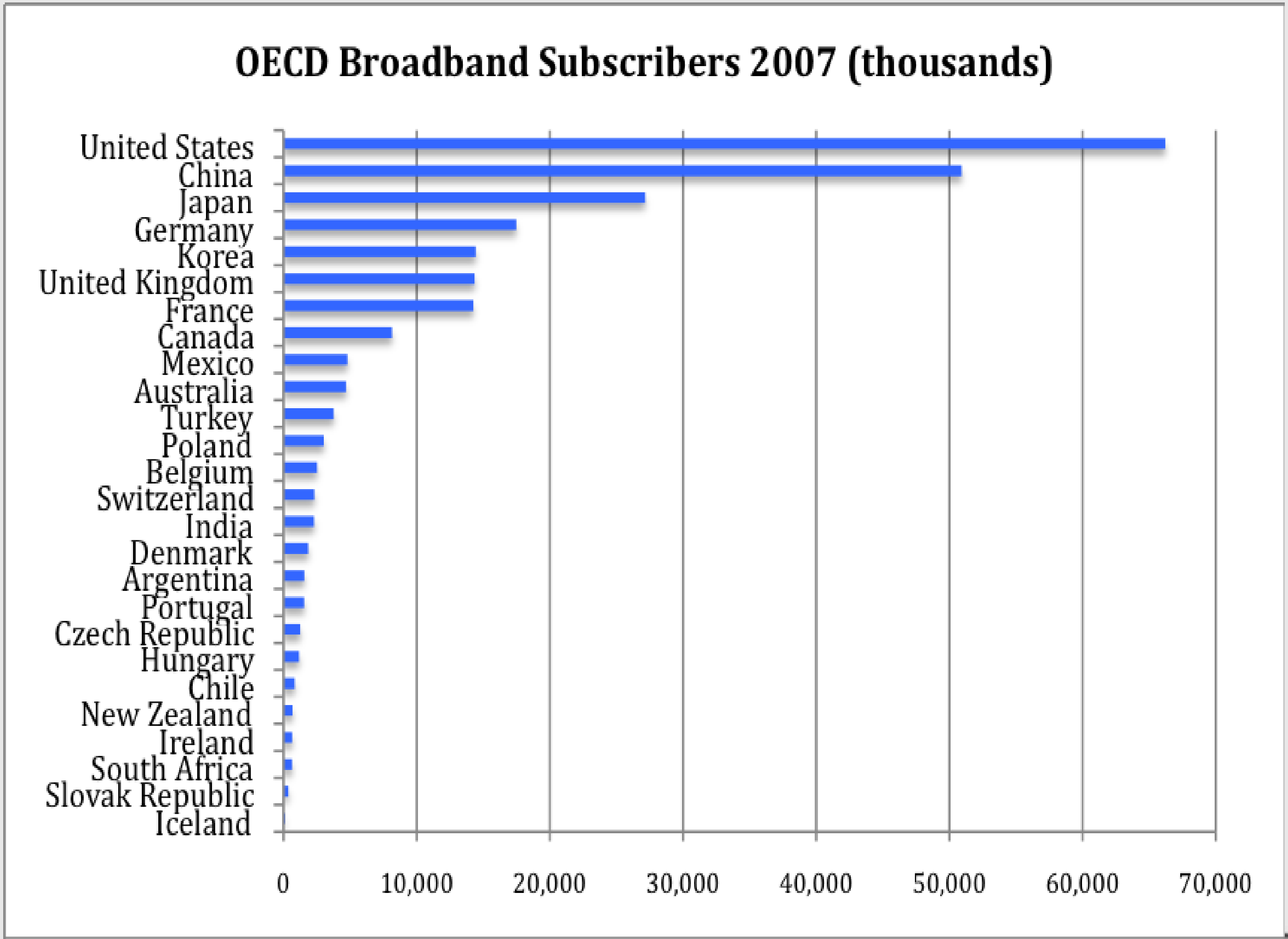
economic development | growth & equity

researchICTafrica.net



theedgeinstitute
economic development | growth & equity

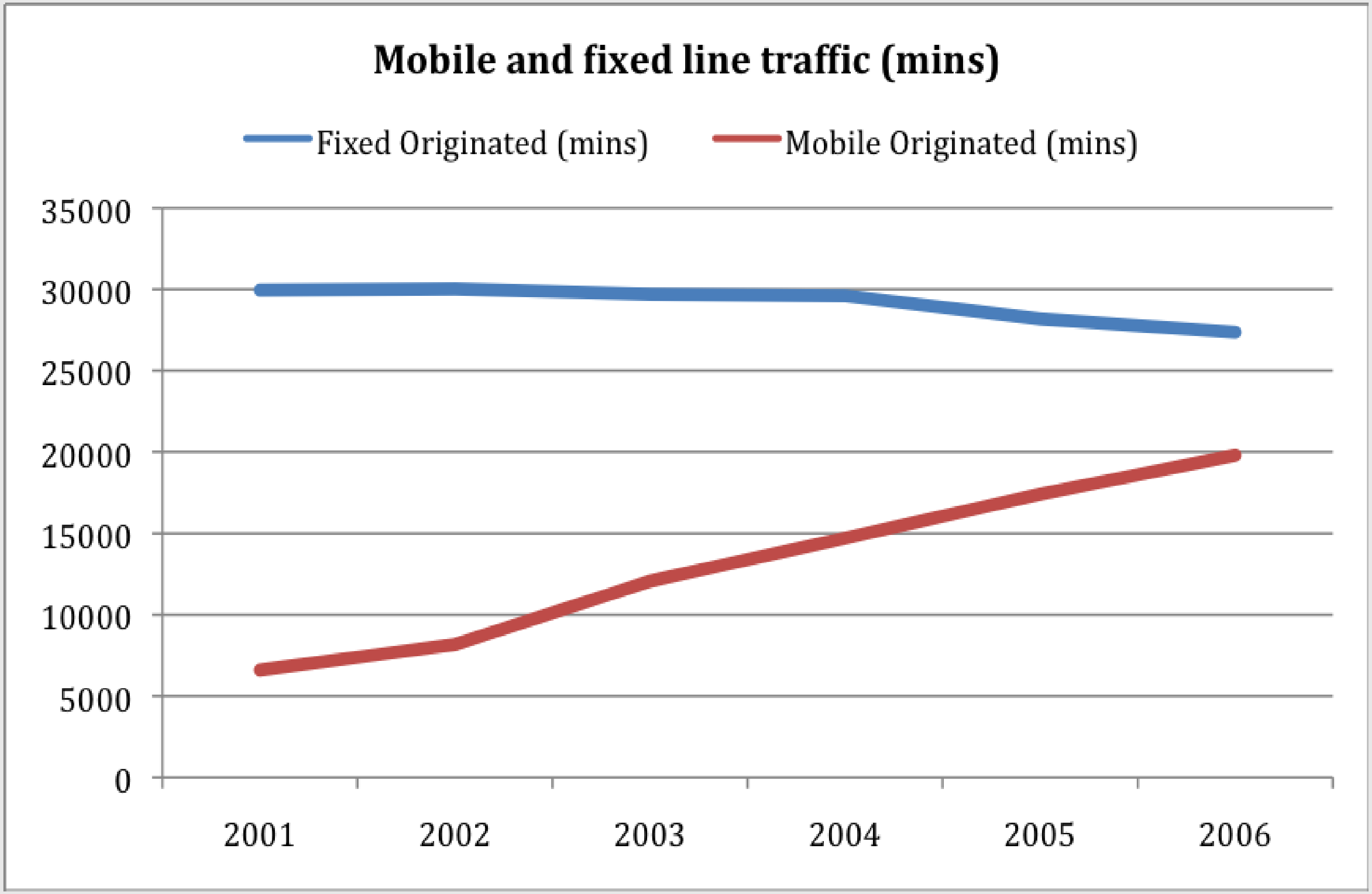
researchICTafrica.net



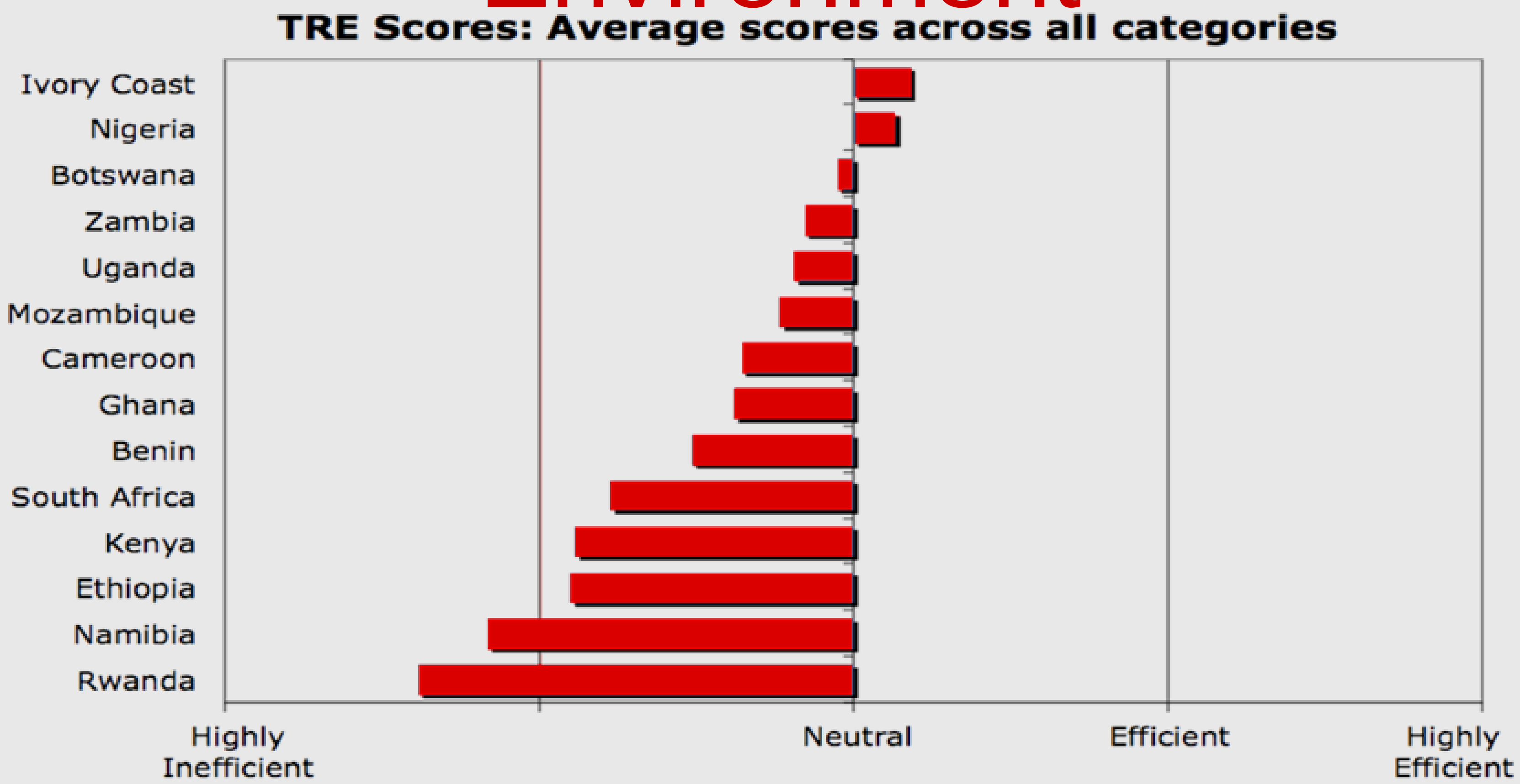
the edge institute

economic development | growth & equity

researchICTafrica.net


Mobile and fixed line traffic (mins)
Fixed Originated (mins)
Mobile Originated (mins)
35000
30000
25000
20000
15000
10000
5000
0
2001
2002
2003
2004
2005
2006

Telecommunication Regulatory Environment

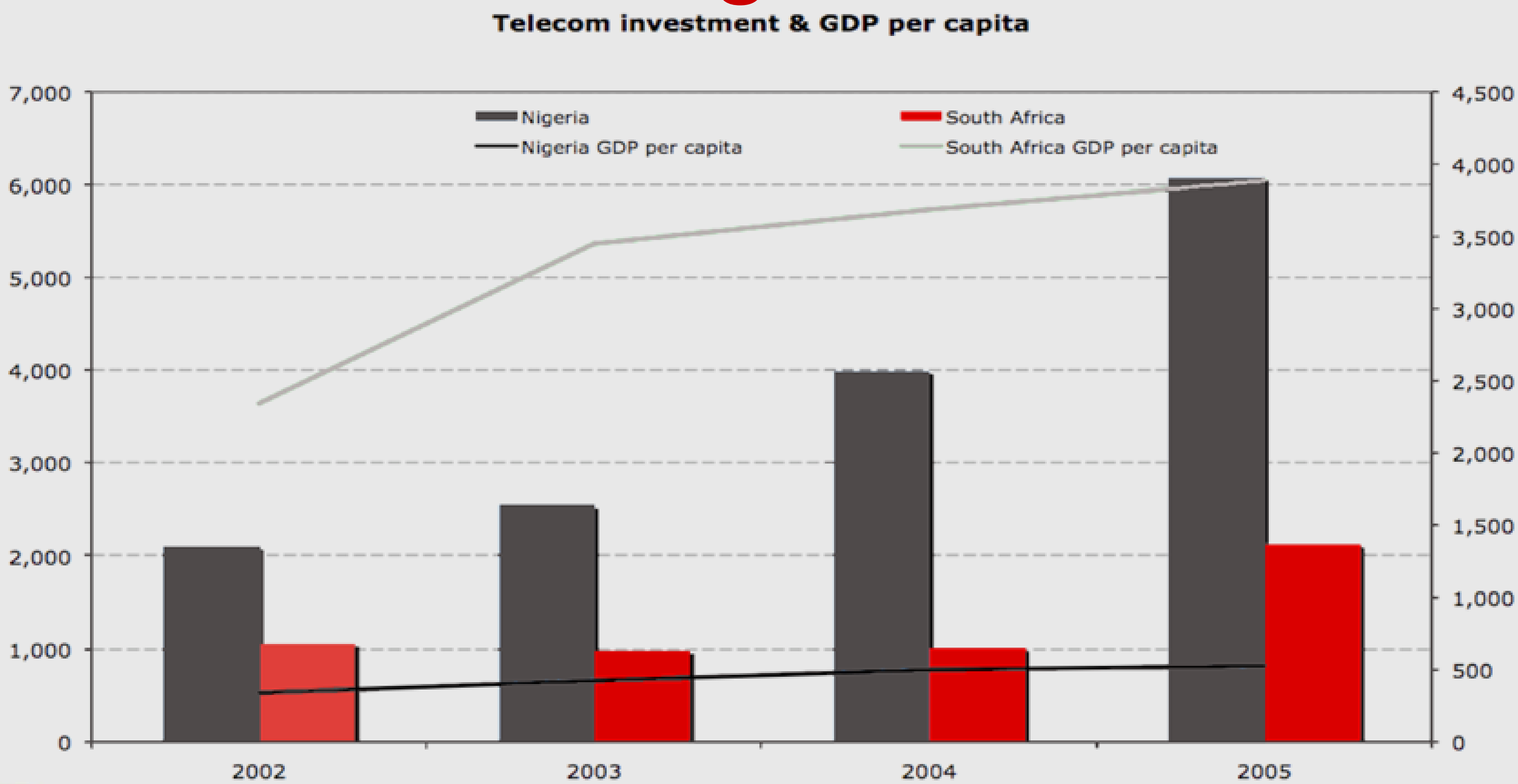


See Esselaar Gillwald Stork (2007) Towards an African e-Index: Telecommunications Performance Across 16 African countries.

theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Comparative FDI in SA & Nigeria



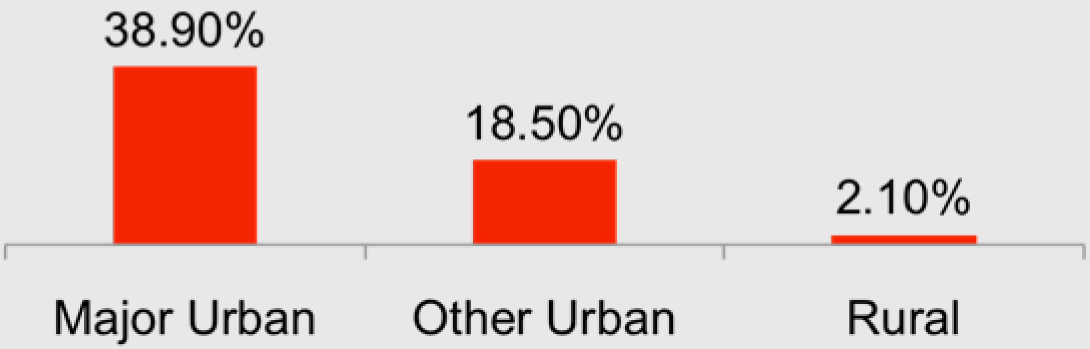
theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Institutional design and delivery

- Statutory process and delays
- Licensing - resolution in the courts
- Interconnection - not concluded - Chap 10
- Essential facilities - Hearings March 2008
- Spectrum - revised band plan delayed
- LLU - delayed resume in November

Households with a working fixed-line - 2007



•Households with working fixed line – **18.2%**

•Urban share of total working fixed lines – **95.7%**

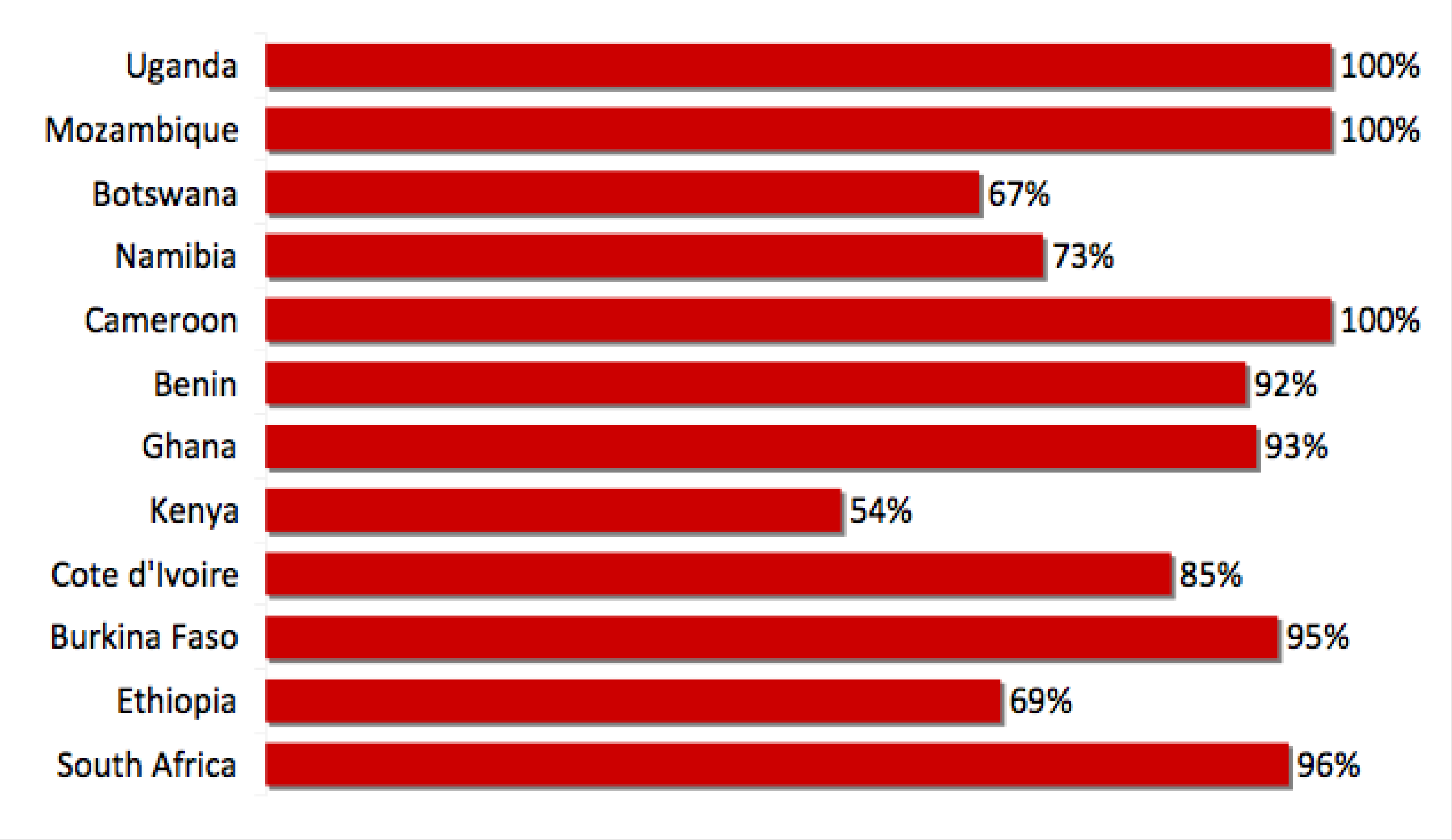
•Average monthly fixed line expenditure – **US$ 31.31**

•Average monthly price a household without fixed-line is willing to pay for the service – **US$ 3.05**

the edge institute
economic development | growth & equity

researchICTafrica.net

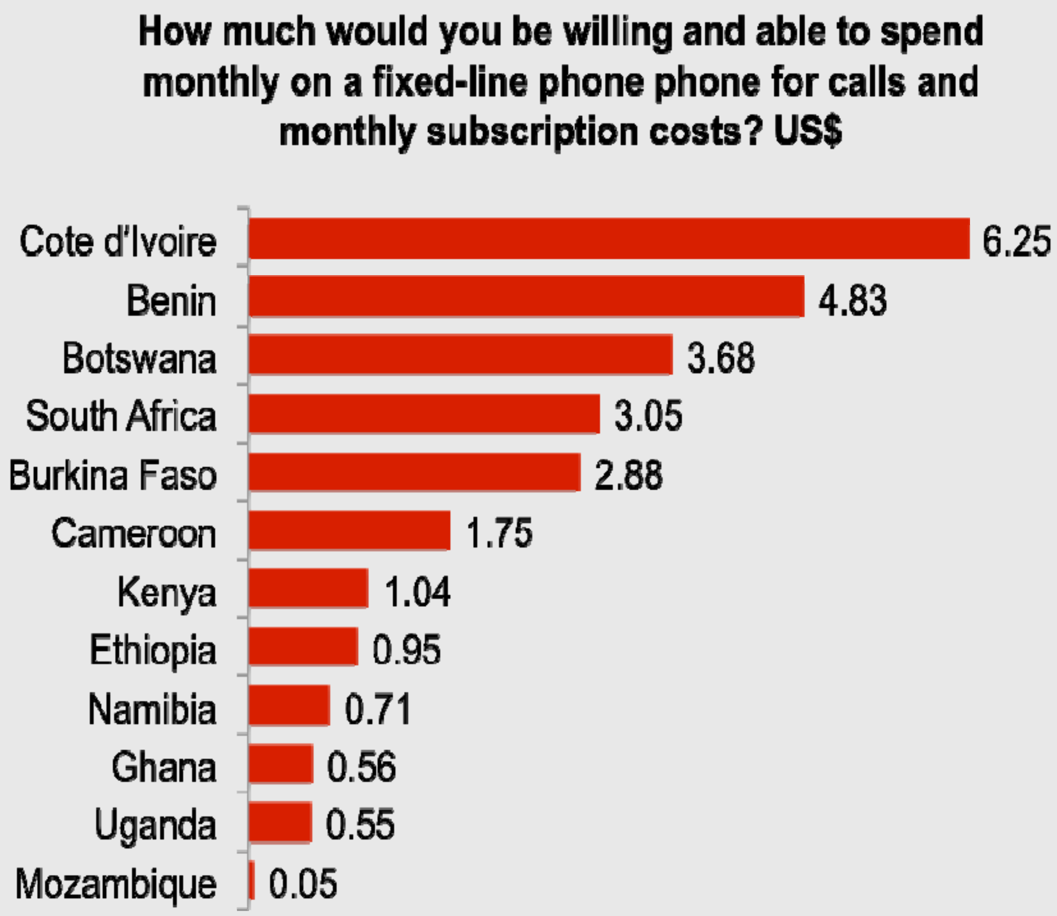
Urban share of residential fixed lines



the edge institute
economic development | growth & equity

researchICTafrica.net

Fixed line willingness to pay

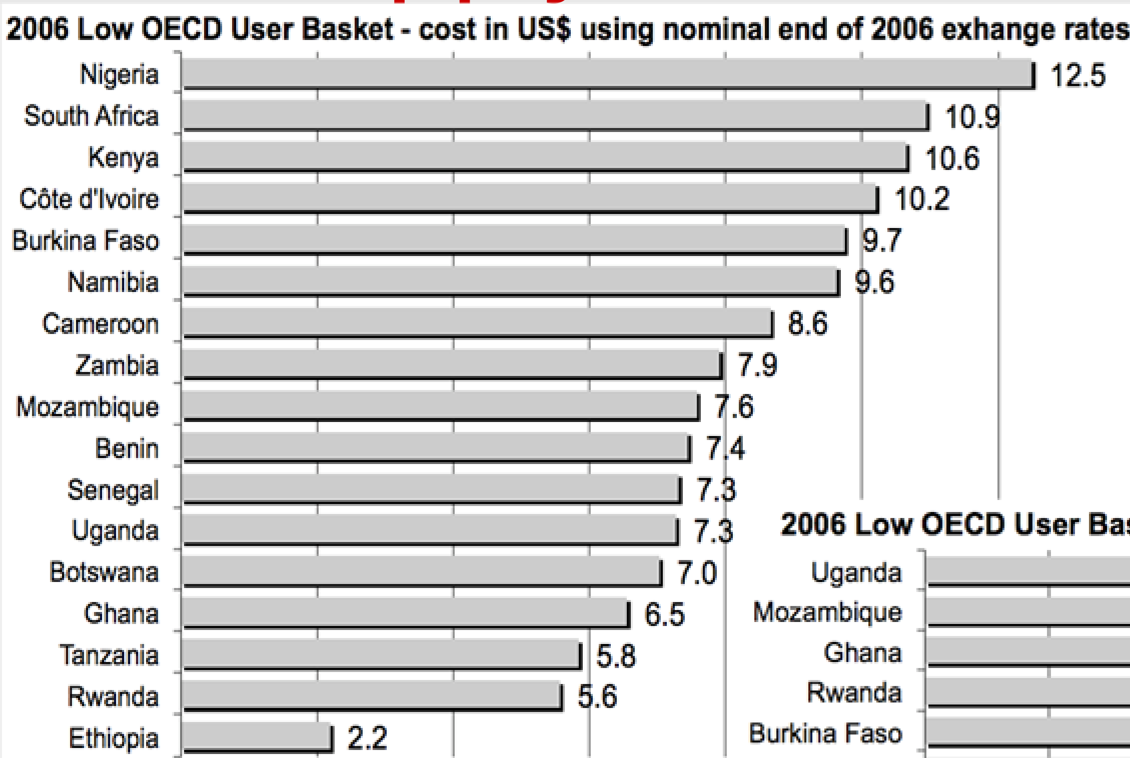


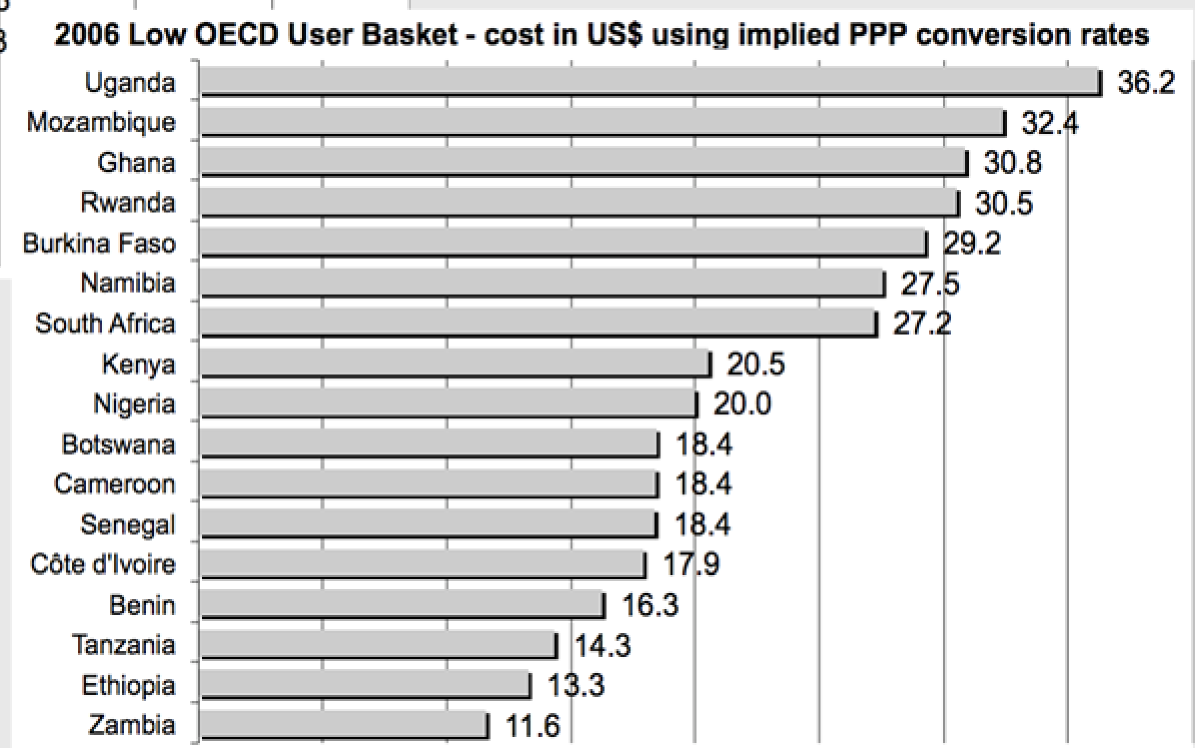
Line rental only in South Africa $8

the edge institute
economic development | growth & equity

researchICTafrica.net

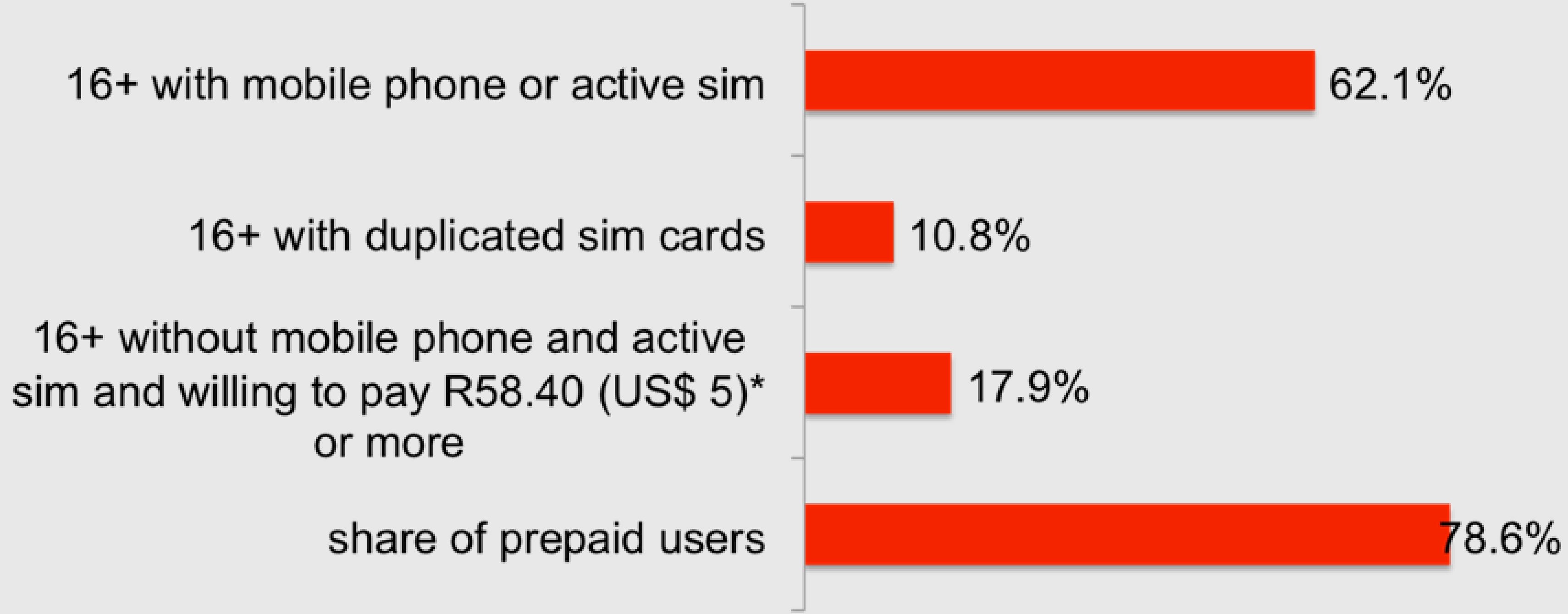
Supply side - mobile pricing





the edge institute
economic development | growth & equity

Mobile phone users



Average monthly WTP for mobile expenditure of non-users that would be interested in getting a mobile phone - R 46.70 (US$ 4.40)*

* At Dec 2007 prices and exchange rates

the edge institute

economic development | growth & equity

researchICTafrica.net

Mobile willingness to pay

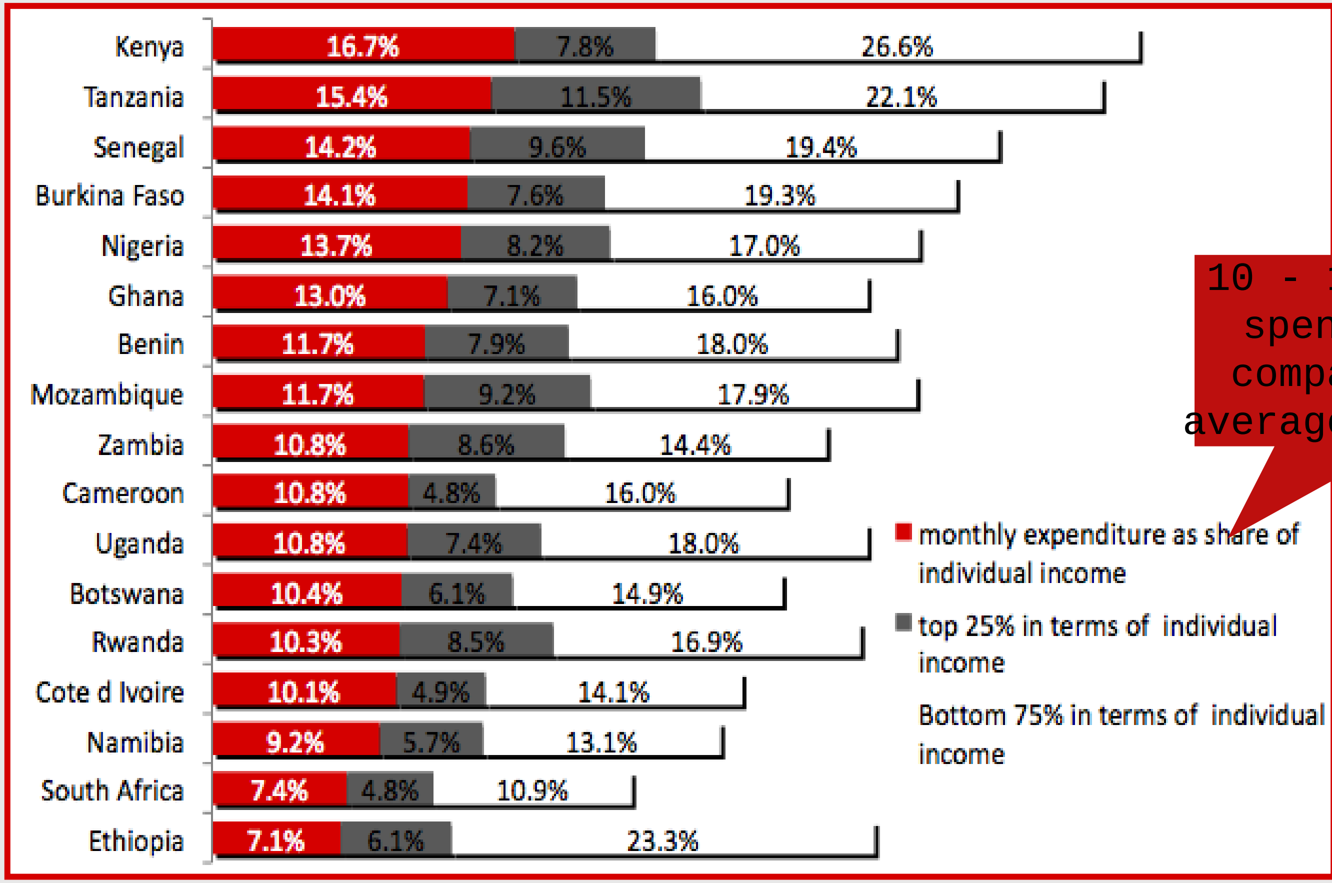
	Average willingness and ability to pay for a mobile handset in US$	Average expected cost of a mobile handset in US$	New users at 20 US$ for an handset	New users at 15 US$ for an handset	New users at 10 US$ for an handset
Benin	7.45	11.44	124,972	487,176	677,715
Botswana	19.14	27.38	119,014	196,496	228,203
Burkina Faso	9	12.84	428,593	1,243,958	1,453,007
Cameroon	15.34	22.16	868,037	1,732,300	1,869,8[illegible]
Cote d Ivoire	29.7	30.06	3,057,420	3,539,351	3,914,2[illegible]
Ethiopia	6.06	64.19	1,436,628	1,637,668	2,644,67[illegible]
Ghana	14.02	23.15	1,283,271	1,469,652	1,841,83[illegible]
Kenya	17.12	26.68	2,862,457	4,165,549	5,663,481
Mozambique	4	23.2	56,457	79,895	287,147
Namibia	24.64	25.12	162,992	192,395	232,584
Nigeria	5.65	12.57	356,907	1,004,573	2,527,884
Rwanda	3.69	9.34	Not available	Not available	Not available
Senegal	19.55	25.43	1,336,691	2,169,548	2,301,775
South Africa	19.25	32.41	2,652,827	3,354,797	4,094,783
Tanzania	10.89	17.3	1,422,927	2,102,510	3,272,065
Uganda	5.74	14.98	-	1,499	1,499

Pent up demand in Cote d'Ivoir & Namibia

the edge institute
economic development | growth & equity

researchICTafrica.net

Percentage of income on mobile

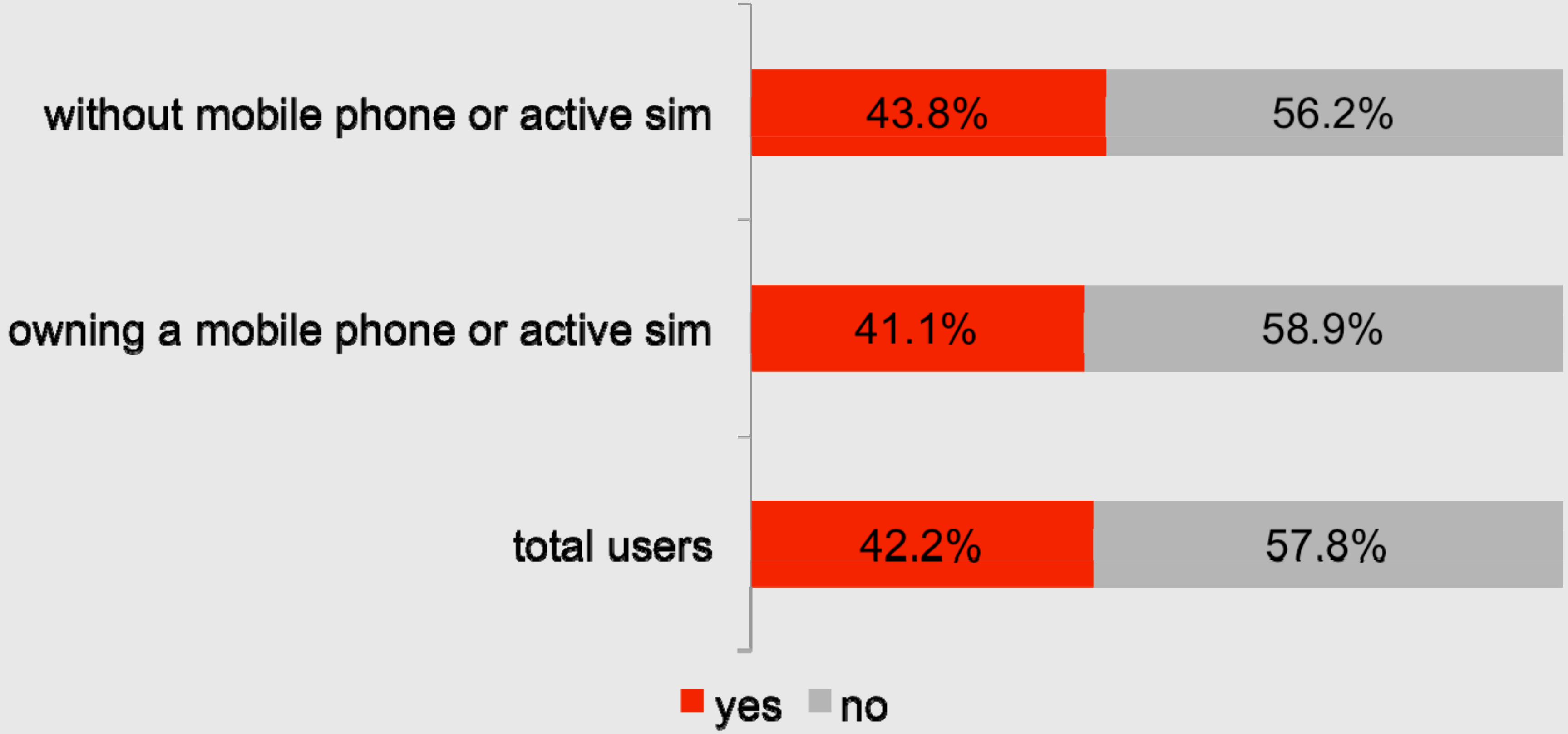


10 - 17% of income spent on mobile compared to OECD averages of around 5%

theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Have you used a public phone in the last three months?



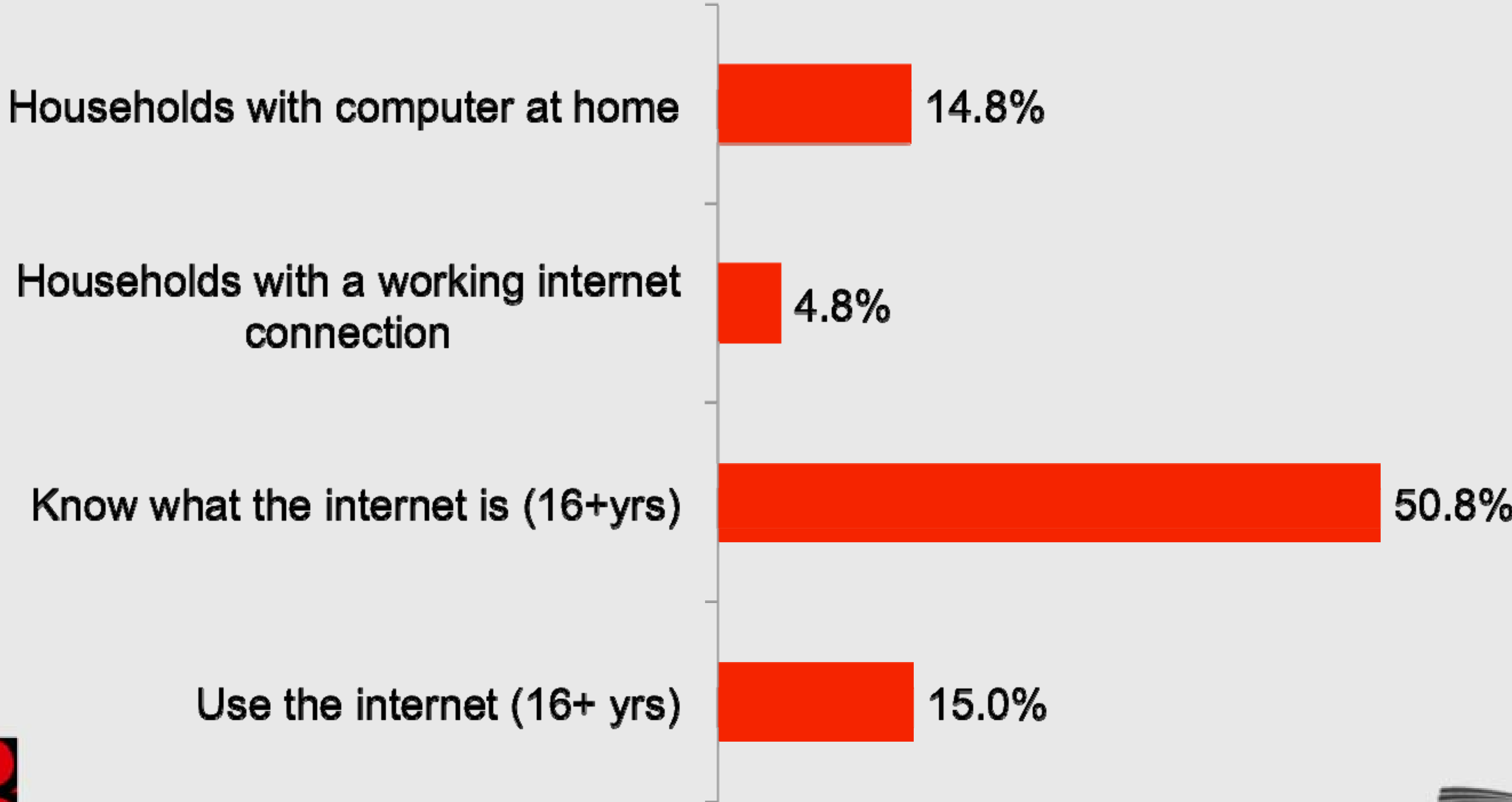
Average monthly public phone expenditure – R 34.82 (US$ 3.24)*

* Exchange rates at Dec 2007

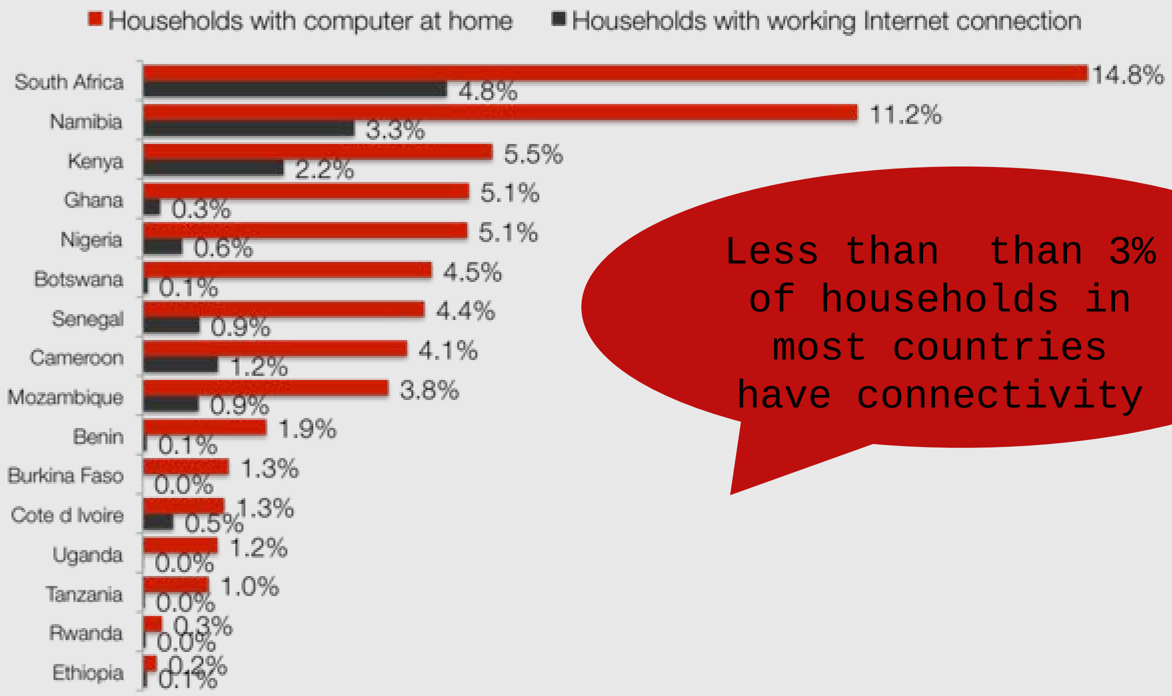
theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Internet access, usage and familiarity



Home computer & connection



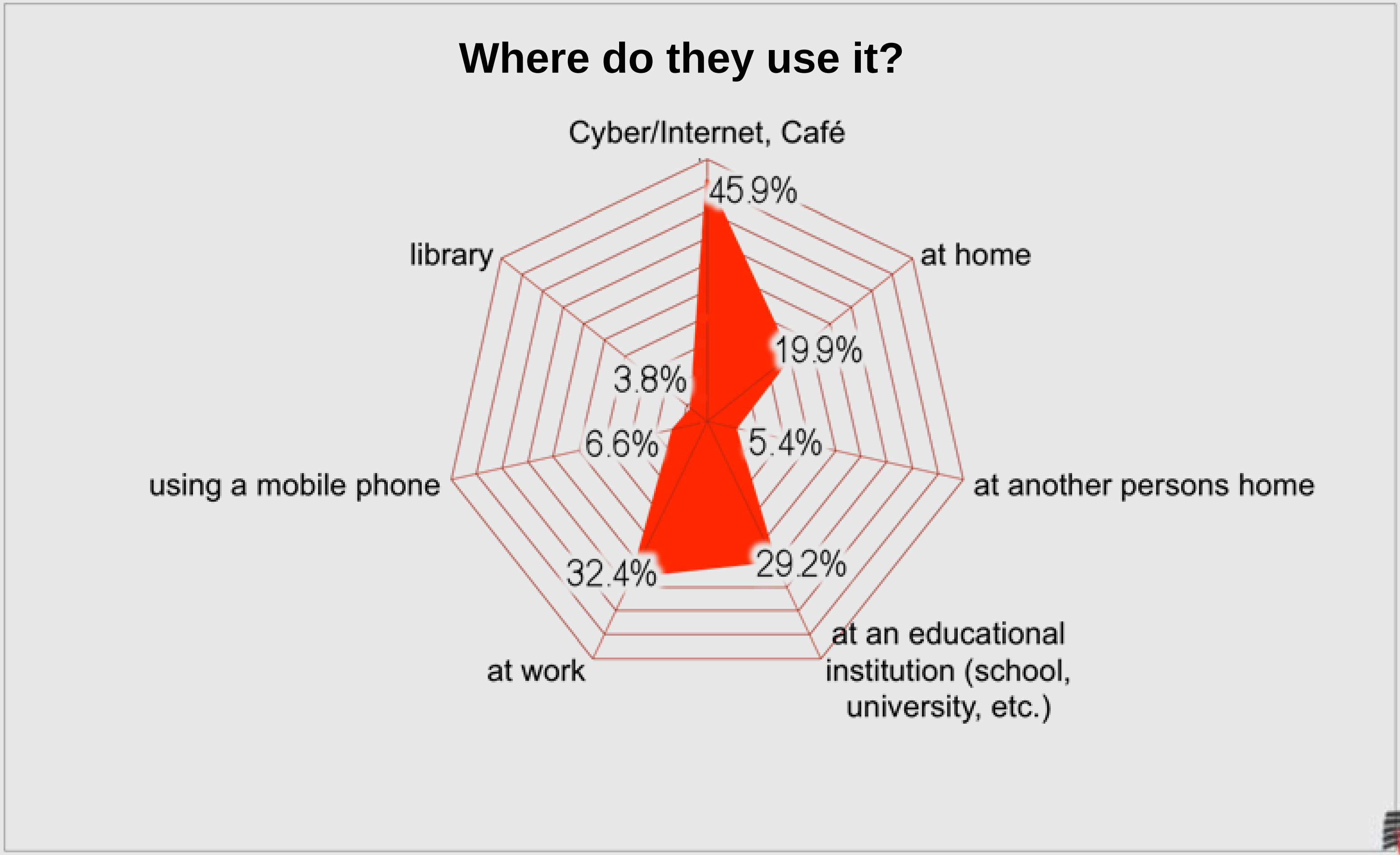
Less than than 3% of households in most countries have connectivity

the edge institute
economic development | growth & equity

researchICTafrica.net

Internet usage

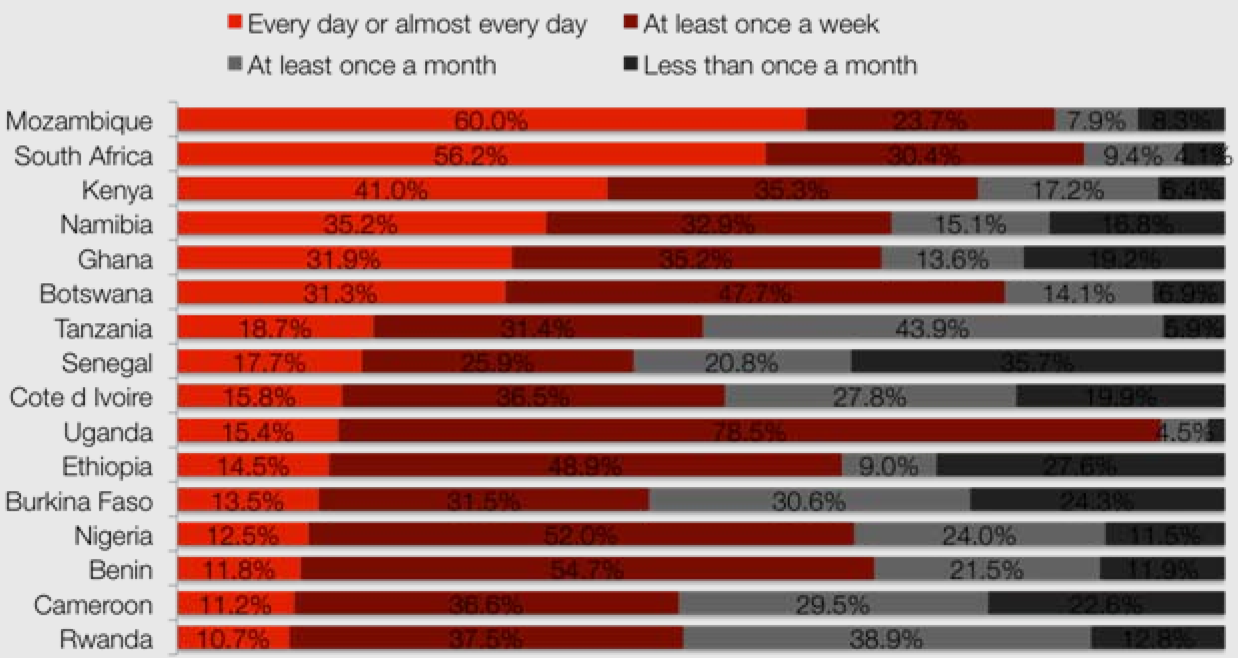
50% know what the internet is, but only 5% use it



theedgeinstitute
economic development | growth & equity

researchICTafrica.net

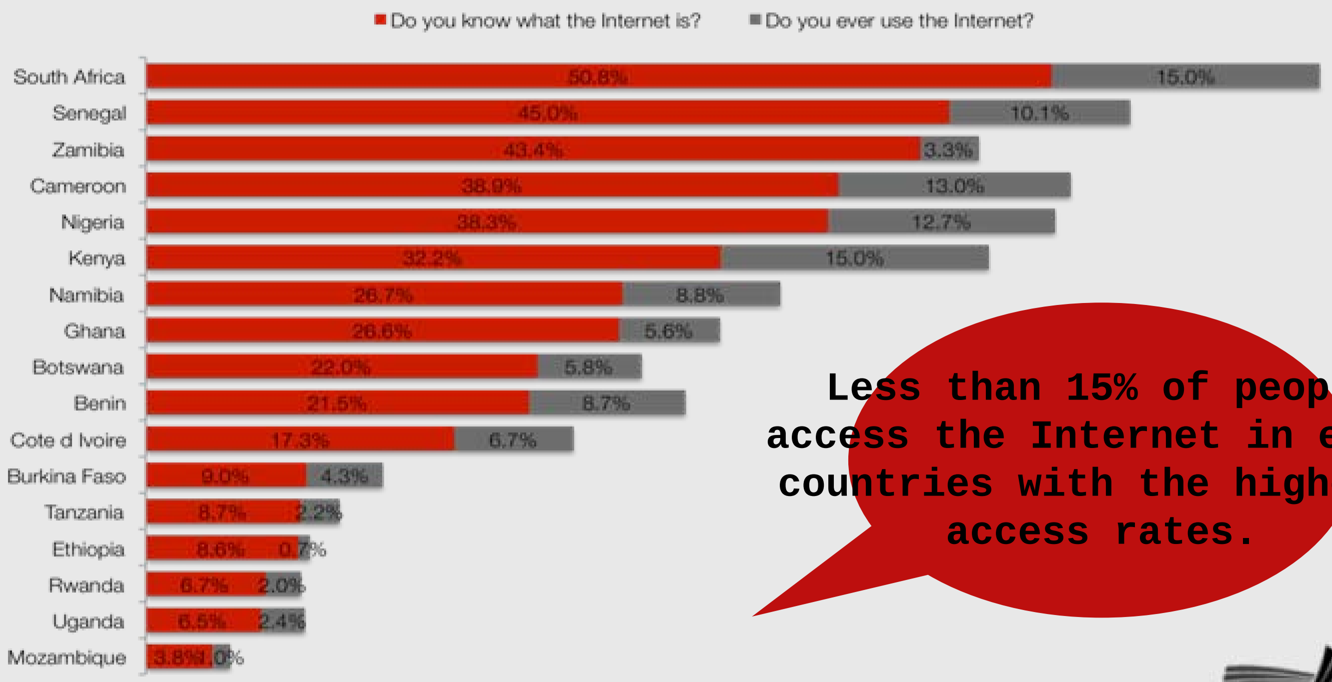
Internet usage and frequency



t h e **e d g e** i n s t i t u t e
economic development | growth & equity

researchICTafrica.net

Internet awareness & usage



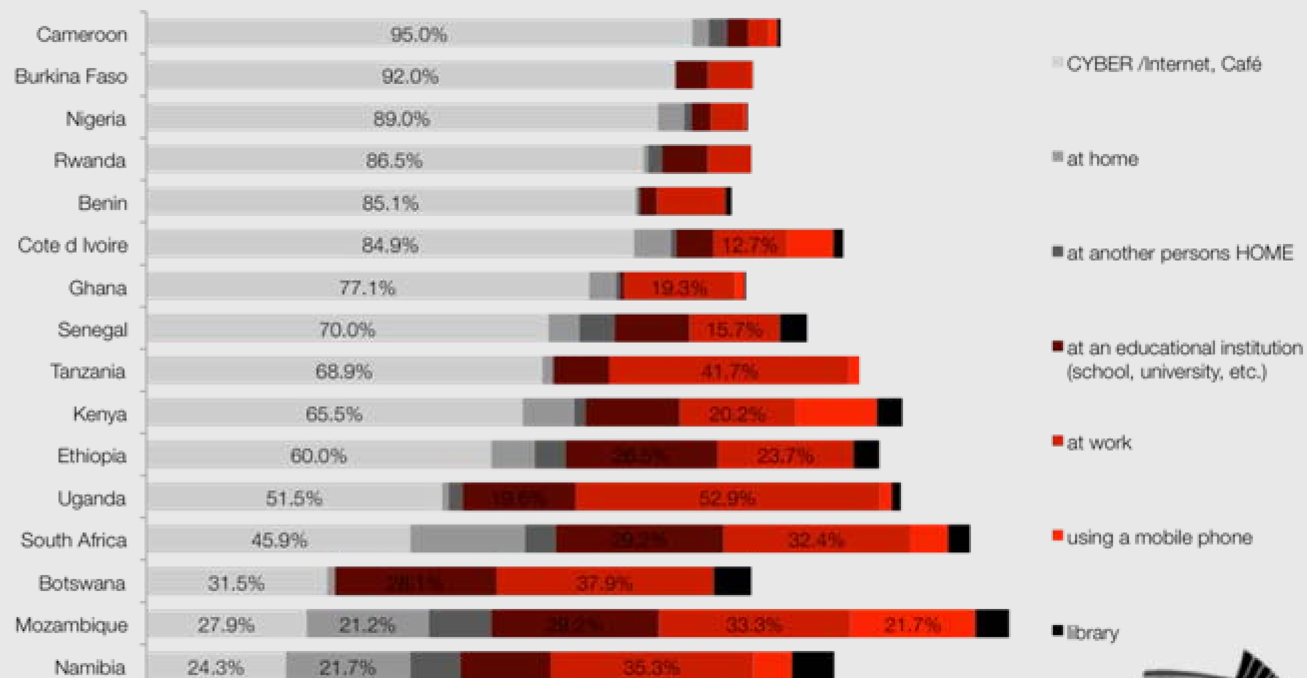
Less than 15% of people access the Internet in even countries with the highest access rates.

the edge institute

economic development | growth & equity

researchICTafrica.net

Points of internet access



theedgeinstitute

economic development | growth & equity

researchICTafrica.net

Presidential Review

- Policy failure - strategies of state ownership/ protection - privatisation, SNO, infraco
  - Remedy: increased competition but requires more effective regulation
- Regulatory failure: bound my onerous statutory requirements demands/timespans, absence of capacity and disenabling law
  - Remedy: Capacitate regulator, amend law
- Market failure: Fixed, no competition, no access Mobile no effective regulation of effective duopoly, high prices

  Internet: not adequate backbone investment/pricing

  Remedy: Enable market entry with service neutral licensing, open access networks.

theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Conclusions

- Policy review - market structure - state ownership -broadband
- Review of bottlenecks in ECAct.
- Institutional arrangements - remove conflicts of interest
- Institutional design - reduce number on Council, increase regulatory staff/skills, limit political patronage
- Create conditions conducive to investment through accountable capacitated institutions, certain regulatory environments and flexible policy frameworks
- Remove protectionist strategies, open markets to competition to meet pent up demand, while developing strategies for backbone investment
- Create enabling regulatory environments through removal of barriers to entry, service neutral licensing, cost-based \ (removal of artificial priced asymmetrical termination), prevention of abuse of market dominance
- Open access regime for optimal use of networks and facilities and spectrum to enable entrepreneurship and innovation
- Development of dedicated human capital strategies for sector institutions
- Targeted, competitively implemented universal services strategies rather than scattergun approach

theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Findings…

Survey finding	Recommendation	Objective	Approach
Fixed line access and usage charges major obstacle to usage	Reduce access charge (monthly line rental) even if higher usage charges to enable entry of consumers into fixed market Open competition in access network Unbundling local loop	Allow competition to drive down prices Ensure cost-based interconnection pricing to enable competitive entry Enable resale of incumbent access network	Create competition while ensuring adequate return to investing network extension.
Mobile phone access and usage constrained by high costs	Increase competition and remove any existing customs and excise and VAT on handsets below $50 and any additional taxes on communication services	Reduce the access and usage price of mobile communication through competition and regulation of termination charges	Even moderate reductions in the access and usage prices can dramatically increase entry and usage which is currently highly constrained by costs in most countries.
Payphones still widely used in multiple access and usage strategy of individuals.	Regulate payphone extension and prices for mobile and fixed network to ensure access for marginalised from fixed and mobile services, and extend these services at public access points to Internet. Support innovations around universal number allowing for messaging and charging.	Extend full range of services to those currently excluded from them by aggregating access and usage in communities.	Ensure that affordable access to a full range of services is available through public access points.

theedgeinstitute
economic development | growth & equity

researchICTafrica.net

Objective…Approach

Internet awareness reasonably high but access limited by absence of skills to use Internet and absence of access points	Extend services at public access points to include Internet. Roll out Internet training in schools, community centres and sectional targets. Reduce the cost of Internet enabled mobile services.	Improve access to affordable Internet and increase computer literacy.	Increase the availability of the Internet through liberalising services provision and reducing facilities costs for ISPs, which should reduce barriers to entry to ISP market, increase competition and drive down prices
Absence of computer literacy to utilise Internet	Develop and implement dedicated human capital strategies in formal and informal education programme, adult literacy programmes and civil service training	Reduce skills barrier to use of enhanced communication services	Even if affordable Internet available, basic computer literacy inhibits access and usage.
Unintended policy outcomes, particularly affordable access to full range of communication services	Develop institutional arrangements and transparent administrative procedures that allow for clear division of policy, regulatory and operational functions and participatory policy processes that draw on all available expertise.	Provide policy and regulatory certainty and create conditions conducive to investment. Attract investment by increasing investors confidence in impartiality of regulator and independence from political interference	Draw on national knowledge and expertise through consultative policy processes and ensure capabilities within decision-making bodies to formulate policy, capacity within autonomous regulatory agencies to implement decisions

...Recommendations

Constrained access and usage of available services	Establish regulatory agencies with the necessary autonomy and resources to regulate effectively within a clear implementation framework.	To build the competency and capacity of the regulator, to enable market efficiency and deal with market failure.	Tendency towards imperfect markets in infrastructure industries, require effective regulation to ensure benefits of competition.
High prices constrain the entry of new consumers into markets and inhibit the usage of those in the market	Remove barriers to entry and establish conditions for fair competition. These include cost-based interconnection and access to facilities of incumbents, prevention of the abuse of market dominance and access to spectrum and numbers; regulate bottleneck facilities;	To allow for the efficient allocation of resources by the market that should result in lower prices and a wider range of services.	Liberalised markets appear to go further in delivering a range of services to consumers than protectionist market strategies
Consumers unaware/confused by artificial licensing categories and	Service-neutral licensing	With the dynamic shifts in technology, the negative impact of policy lags can be overcome with service-neutral licensing that allows operators and service providers to develop organically and seamlessly to offer new services.	Allow for technological progress in converging environment to meet demand without licence constraint and reduce regulatory and licensing burden.

www.researchICTafrica.net

www.saconnect.org

theedgeinstitute

economic development | growth & equity

researchICTafrica.net